

Post-Operative Care

# After Your Heart Surgery

Advanced cardiac care to get you back to those you love.





## Important Telephone Numbers

The Chattanooga Heart Institute's  
Cardiothoracic Surgeon office: 423.624.5200

### Surgeons:

Matthew Richey, MD

Alan Simeone, MD, FACS

James Zellner, MD, FACS

### Nurse Practitioners:

Gillian Akins

Cindi Cross

Greg Evans

Mike Loga

**The Chattanooga Heart Institute: 423.697.2000**

Includes all of The Chattanooga Heart Institute's cardiologists and cardiology nurse practitioners, locations and offices

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This booklet has information to help you care for yourself and speed your recovery after heart surgery. On page 1 there is a summary of the most important information. The rest of the handout contains more detailed information. If you have any questions or concerns after you have read this handout, please call CHI Memorial's Cardiovascular Surgery Nurse Navigators.

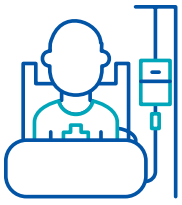
**Monday - Friday, 8 a.m. to 4 p.m.,  
call Cardiovascular Surgery Nurse Navigators:**

Sue Brown, RN, BSN, MBA 423.495.8099

Doris Morgan, RN 423.495.4401

**After hours, weekends or holidays:**

Call your surgeon's office at **423.624.5200**. There is someone on call for the surgical team 24/7. They will manage all of your care for the first 30 days after you leave the hospital.



## Summary - Postoperative Care

### Incision care

#### A. Shower every day

- Use a clean washcloth and towel
- Wash with soap and water. Rinse. Pat dry.
- Do not put anything on your incisions - No ointment, gel, lotion, powder (unless your doctor tells you to)
- Do not remove the tape from your chest or arm incision(s)

#### B. Wash your hands often - especially before you touch your incisions

#### C. Brush your teeth twice a day

#### D. Women - wear a supportive bra

#### E. Diabetics

- Check your blood sugar as instructed
- Keep your blood sugar in the recommended range
- Eat recommended diet

#### Why? Because a high blood sugar:

- Slows nutrients and oxygen from getting to your cells
- Increases inflammation (swelling)
- Prevents your immune system from working well
- Increases your chance of infection

### Signs of infection

#### If your chest, arm or leg incision(s) have:

- Open areas
- Drainage
- Or if you have a fever of 101 or more

**Call your surgeon or nurse navigator!**

**Very Important!**

### Activity

- Join cardiac rehabilitation as soon as possible (goal: 2 weeks after discharge)
- Go on 3-4 longer walks per day
- Get up and walk around or do chair exercises every hour

### Breathing exercises *once an hour (while awake)*

- Incentive spirometer (IS), flutter or IPEP
- Try to cough up any secretions after doing breathing exercises

### Fluid balance

- **Weigh yourself every morning** - after you urinate for the first time and before you eat or drink
- Keep a record of your weight and compare it to what you weighed yesterday and last week
- Limit sodium intake (as ordered by your doctor)

#### • **Call your doctor or nurse navigator if you gain:**

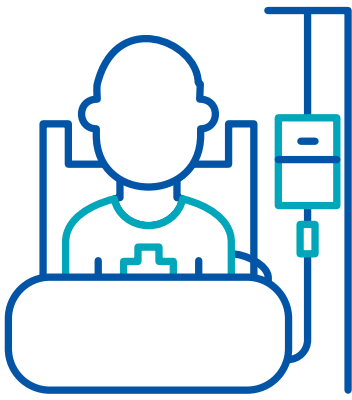
- 2-3 pounds in one (1) day
- 5 pounds in one (1) week

#### **Especially if you have symptoms of fluid overload (retaining fluid), like:**

- Feeling short of breath
- Swelling of your feet, ankles, lower legs or abdomen
- Needing to add pillows or sit up to breathe at night
- A dry, hacking cough

#### **If fluid overload gets worse, causing you to:**

- Become confused
- Struggle to breathe, even while resting
- Cough or wheeze (new or that doesn't stop)
- Cough up pink, frothy sputum **Call 911!**



# More detailed postoperative instructions

## Surgical limitations

- Do not lift/push/pull more than 10 pounds for one month
- No driving for one month
- You may lift/push/pull 20 pounds for post op months 2 and 3 following surgery
- After 3 months there is no limit on how much you may lift



## Incision care

- Do not submerge in water until incisions are healed (no swimming, tub baths, jacuzzis)
- Shower every day
- Use a clean washcloth and towel every day
- Wash with soap and water. Rinse well. Pat dry.
- Do not put any lotion, ointment, gel, or powder on incisions (unless otherwise directed)
- Wash your hands frequently, especially prior to touching incisions.
- Brush your teeth twice a day



## Women should wear a supportive bra

The weight of your breasts can pull on your chest incision and cause your incision to open and become infected because bacteria, yeast and fungi thrive in the skin folds under the breast. Your nurse may be able to provide a supportive bra, however there are limited styles and sizes available. You may also use a bra of your choice. We recommend a sports bra that opens in the front, one size larger than usual.

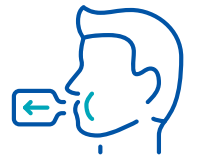


## Clicking noises from your sternum (breast bone)

This is common for a few days after your surgery, especially when you move around. Clicking noises should decrease as your sternum fuses (heals) and go away completely within a couple of weeks. **If the clicking noise gets worse, call your surgeon.**



## If you have a temperature less than 101 F - Practice breathing exercises (incentive spirometer, flutter or IPEP) every hour while awake. Afterward, attempt to cough. Increase activity and walking.



## Chest tube site dressings

These small "slit shaped" openings located under your ribs are where drainage tubes were removed from your body after surgery. The site is covered with a clear, transparent dressing. Leave the dressing in place until it falls off or until it has been on at least 48-72 hours. Once the dressing is removed clean the areas with soap and water. If there is still drainage and you must cover the wound, avoid waterproof dressings.



**Sutures/stitches** - leave them alone. They will eventually fall off. If a suture is catching on your clothes, you may cover it with an adhesive bandage. Tell your doctor or nurse practitioner if there is a suture that is bothering you at your next appointment.



## Breathing problems:

If shortness of breath is normal for you, it may not improve.



**If shortness of breath is something new for you, your surgical team should evaluate the cause, which might include:**

### Pleural or pericardial effusion:

A buildup of fluid in the space between your lungs and chest cavity (pleural effusion) or the space around your heart and inside the pericardial sac (pericardial effusion) – both are fairly common after heart surgery and will usually diminish over time. It only becomes a problem if the effusion becomes large enough to make it hard for your heart or lungs to expand. Treatment starts with diuretics (fluid pills) and progresses to drainage of the fluid if necessary.

**Pneumonia:** Pneumonia is an infection that causes inflammation and fluid in the air sacs in your lungs. This is usually prevented by doing deep breathing exercises with your incentive spirometer (ICS) or flutter once an hour (while awake) followed by attempting to cough up any secretions.

## Having trouble coughing out secretions?

- Drink plenty of fluids to thin secretions
- Sit up straight to do breathing exercises (ICS, flutter)
- Splint with a pillow (hug it tight) and lean forward slightly when you cough
- A humidifier may help to thin secretions
- You may try OTC Mucinex® to help expectorate phlegm



## Shoulder, upper back or neck pain:

Pain or burning in your shoulders, neck, or top of your back is very common after heart surgery. Positioning during surgery and decreased activity both contribute to this pain. Just having a chest incision tends to make you tense or hunched.



Cardiac rehabilitation, gentle stretching and heat or ice may help. You can also try Tylenol®. Let your surgical team know if these things don't help.

**Massage:** Please wait 3 months before you schedule a massage.

## Prescription medication refills:

Ask whichever doctor prescribed the medication for a refill. If you have a medicine that was ordered by a hospitalist, call your primary care physician (PCP) for refills.



## Pain medication refills:

If you need a refill for a pain medication (or a new prescription), **please call your surgeons' office 423.624.5200 between 9 a.m. and 4 p.m., Monday through Thursday.**

*Georgia State law does not allow prescriptions for narcotics written by Advanced Practice Nurses (APNs) to be filled in Georgia. Fill any narcotic prescriptions while still in Tennessee.*

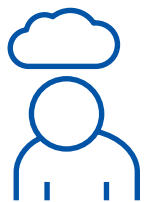
## "Orthostatic hypotension"

means your blood pressure drops when you change positions, causing you to feel light-headed or faint. This is pretty common after heart surgery. Change position slowly. If you feel dizzy when you stand, stay close to the bed or sit down until the sensation passes. This will get better over time. The more time you spend out of bed, the sooner this will go away.



**\*\*If your heart rate or blood pressure are consistently low and you feel dizzy/faint after slowly adjusting to a change of position, call your doctor. One of your medications may need to be changed or adjusted.**

**Depression** is common after heart surgery. In fact, a recent meta-analysis of studies found that **30-45% of people who have heart surgery suffer with depression during their recovery period.** Although some recover untreated, depression can lead to poor postoperative outcomes. **Depression is actually a risk factor for heart disease** (like



smoking, high blood pressure, and diabetes). Depression can cause sleep disturbances and a decreased interest in sex. You may not feel like exercising or eating right. Depression may make you feel sad and blue or irritable and anxious. **If you are depressed, talk to your primary doctor.**

**Sleep:** Lots of people have trouble sleeping after heart surgery - either due to having to sleep in a different position, feeling uncomfortable or awakening with movement in sleep, or because sleep cycles are disrupted in the hospital. Some prefer sleeping in a recliner at first because it is easier to get up. Others go directly to bed without problems. Regardless of where you sleep, good sleep hygiene may help you sleep better.



**Sleep tips:**

- During the daytime open the curtains and turn on the lights
- Avoid daytime naps, or limit to 15-20 minute “power-naps”
- Avoid bright lights at bedtime
- Avoid stimulants like caffeine at least 6 hours before bedtime
- Avoid excessive food or drink at night
- Maintain a regular sleep schedule
- Switch off devices/avoid screens at least 1 hour prior to bedtime
- Use the bed for sleep. If you can’t sleep, get up for a while, until you feel sleepy
- Avoid obsessive clock watching of “how many hours I slept”
- Keep the bedroom cool, dark, and comfortable at night

Your surgeon will not prescribe anxiety or sleeping pills. Please contact your PCP if the sleep hygiene tips do not help.

**Sex:** you can resume sexual relations whenever you feel comfortable. You and your partner may be fearful to resume sex. (Remember - do not lift, push, or pull more than 10 pounds). The truth is that sex is no harder on the body than climbing a few flights of stairs or briskly walking four or

five blocks. Your chances of having a heart attack during sex are small. It is important for you to discuss your feelings. Speak to your PCP about this if you continue to have issues.

**Exercise:**

- Get up and walk or do chair exercises every hour. This will keep you limber and help deliver oxygen to your tissues and incisions.
- Go on 3-4 **longer** walks per day, starting at the number steps you were walking while in the hospital. This generally can’t be done inside your house (not enough room). Try to find a safe place where you can walk. Ask a cardiac rehab staff member before you are discharged if you don’t know how far you are walking.
- Gradually increase the number of steps you walk every day. Make goals for yourself to increase the distance. Slow down or stop and rest if you have trouble breathing, feel dizzy, have leg cramps, unusual fatigue, and/or chest pain. Walk at a pace that you are able to carry on a conversation (or sing if you are walking alone) without having to gasp for breath. The goals below are only recommendations on the number of steps you should walk per day based on the number of days since your surgery. It depends on how active you were prior to surgery.

**Post-Operative physical activity recommendations.**

| 1-5 Days           | 6-10 Days          | 10-21 Days                    | >21 Days                      |
|--------------------|--------------------|-------------------------------|-------------------------------|
| 1,000<br>Steps/day | 2,300<br>Steps/day | 3,000<br>- 5,400<br>Steps/day | 5,400<br>- 7,500<br>Steps/day |

Free apps to track your steps with just your smartphone (IOS and Android):

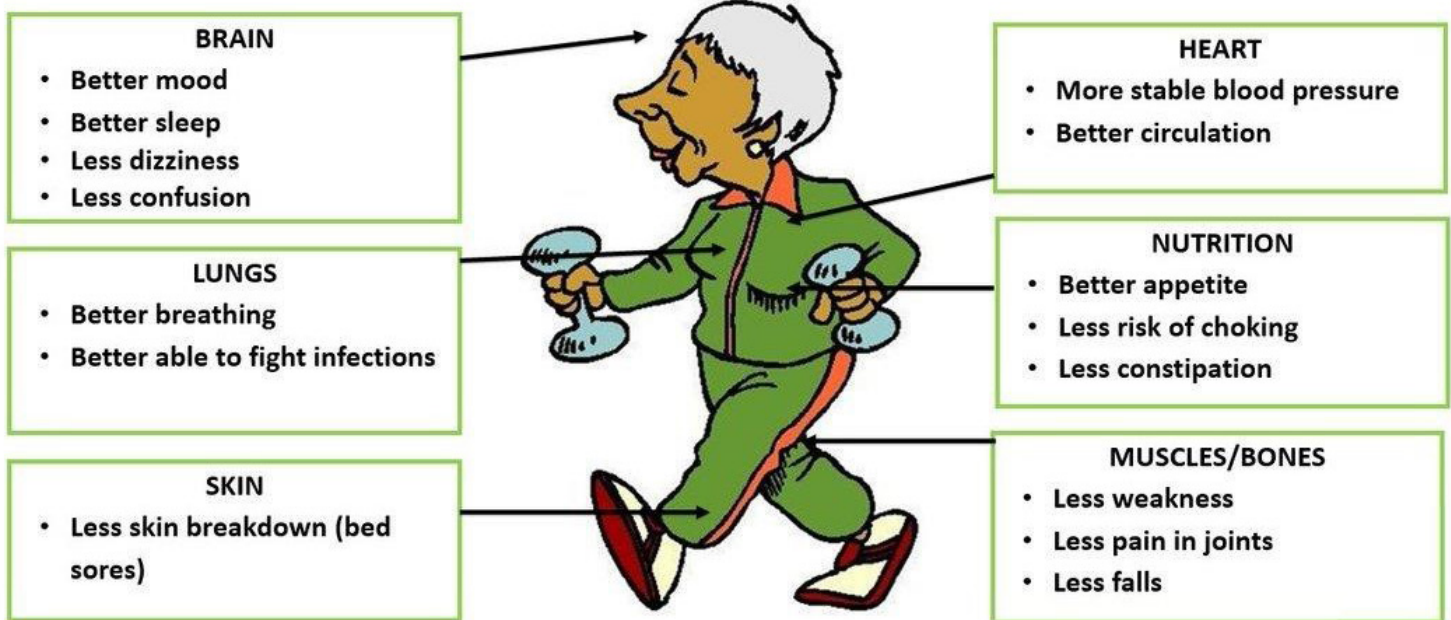
- Leap Steps Counter
- Pacer
- StepsApp
- MapMyWalk
- Human
- Noom Walk

There are lots more, just check your app store.

# Benefits of Getting Out of Bed While in the Hospital

## Strategies

- Sit up for all your meals
- Sit up in a chair when you have visitors
- Walk around the unit either with help or by yourself
- Do bed exercises on your own throughout the day







## Cardiac Rehabilitation

**Decreases**

Hospital readmissions  
Emergency room visits  
Angina/Chest pain  
Mortality (Dying)  
Cardiac mortality - 31%  
All cause mortality - 27%  
Cardiac medications  
2nd Heart attack or heart surgery  
Risk of future disability  
Cholesterol  
Blood pressure  
Helps with weight loss  
Anxiety and depression

**Increases**

Quality of life scores  
Overall health  
Exercise health  
Likelihood of smoking cessation  
Psychological health  
Heart function  
*(for those with heart failure)*  
Ability to manage stress

# Cardiac Rehabilitation

Please schedule an appointment with a cardiac rehabilitation program as soon as possible. We recommend attending cardiac rehabilitation at the program closest to your home with a **goal of starting 2 weeks after discharge** from the hospital.

**CHI Memorial Hospital's Cardiopulmonary Rehabilitation is committed to providing the highest quality of care. Call 423.495.7764 to schedule an appointment. If you need information on programs closest to your home, speak to the cardiac rehab staff members when they walk with you, or call them.**

Generally, cardiac rehabilitation is **3 sessions per week for 12 weeks**. Talk to the cardiac rehab staff if you are not able to attend as often or as long. They may be able to adjust the program.

**Most insurance covers part or all of Cardiac Rehabilitation.** Please check with your insurance company for your policy coverage.

**Recovery:** usually takes 3 to 6 months. The more active you are and the closer you follow post-op instructions, the sooner you will recover.

**Nutrition:** A healthy diet is **vital** for healing. Many people experience a lack of appetite after surgery. Food may taste odd or different, and you may feel vaguely queasy. Your body needs nutrition to heal – especially protein. Eat nutrient-dense foods: multi-colored non-starchy vegetables (including the fiber), some fruit, whole grains, nuts, and healthy fat. Avoid ultra-processed, sugary or salty foods. Baked or broiled is better than fried.

**Diabetics** should schedule a follow up appointment with their primary care physician (PCP) 1-2 weeks after discharge for prescriptions and advice on how often to check your blood sugar. Follow your prescribed diabetic diet. Discuss specific diet questions with your primary care physician (PCP). Wounds heal better when blood glucose levels are normal. A high blood glucose increases your chance of infection and slows healing.



CHI Memorial's Outpatient Cardiopulmonary Rehabilitation is located in the Guerry Heart & Vascular Center.

**Constipation** is common after heart surgery due to changes in eating habits, activity level and is a side effect of some medications (especially narcotic pain meds). Drink plenty of water, eat foods with fiber (found in fresh fruits, vegetables, and whole grains). Eat regular meals. Exercise. If necessary, **you may take over the counter (OTC) medicines**, such as a stool softener (Colace), laxatives such as Miralax or Ducolax, Fleet's enema or a glycerine suppository.

**Dental checkups:** Regular dental checkups and cleanings are important, but **please wait to see your dentist until 3 months post-operatively** unless it is for an emergency, such as a broken tooth or an abscess.

**Valve surgery:** If you had a valve repair or replacement, **you may need antibiotics** prior to any invasive procedure like surgery, dental work or after any accidental injury. Routine visits to the dentist for cleanings and good oral health are very important.



# Post-Operative Medications

## Anticoagulants

### (Coumadin, Aspirin, Xarelto, Eliquis, Plavix):

A blood thinner is given to prevent blood clot formation after surgery

**Possible side effects include:** bleeding, bruising, feeling lousy

## Beta-Blockers

### (Metoprolol, Atenolol, Carvedilol):

Reduce the work load on your heart by lowering your heart rate and also your blood pressure

**Possible side effects include:** dizziness, feelings of heart beating in your chest, low blood pressure, low heart rate

## ACE-Inhibitors

### (Lisinopril, Enalapril, Benazepril):

Decrease the workload of the heart by lowering your blood pressure

**Possible side effects include:** low blood pressure, lightheaded or dizziness, headache, nausea/vomiting

## Lipid-Lowering Medications

### (Simvastatin, Rosuvastatin):

Reduce the amount of LDL, or 'bad' cholesterol, and other fats in the blood

**Possible side effects include:** abdominal cramping, constipation, diarrhea, heartburn, nausea

## Anti-arrhythmics

### (Amiodarone):

Used to treat abnormal heart rhythm

**Possible side effects include:** low heart rate, shortness of breath, nausea/vomiting

## Oxycodone

### (Percocet, Roxicodone):

Used to control post-operative pain; best taken with food to minimize

**Possible side effects include:** drowsiness, nausea, vomiting, constipation, faint or lightheadedness

## Warfarin

### (Coumadin, Jantoven):

If you are taking a blood thinner called Warfarin (Coumadin, Jantoven), you should eat a diet with a consistent amount of vitamin K. Vitamin K is found in dark green, leafy vegetables, and other foods. You will be scheduled for INR at the Chattanooga Heart Institute location. **You should make this appointment a priority.** It is very important to keep your INR within a prescribed range to prevent blood clots or bleeding.

## Medications



***Talk to your doctor, nurse or nurse navigator if you are concerned about getting or affording your medications.***

- Consult your doctor before making any changes to your medications.
- Be sure you understand what *each* of your medications are for, their common side effects, and which of your old medications to resume. Do not rely on a spouse or loved one to do this for you.
- Be sure to tell your doctor if you have any problems getting or taking your medications.

***Ask your surgeon or surgical nurse practitioner when you can return to work.***



## Fluid Balance After Heart Surgery

Monitor your fluid balance after heart surgery by weighing yourself every morning. This is a good way to prevent an ER visit or hospital readmission. **If you don't have a scale** - talk to your nurse navigator. Watch for trends in your weight- up or down- that indicate fluid balance. Use the same scale- don't worry if your weight is different on another scale. Don't weigh yourself throughout the day- it is normal for weight to fluctuate throughout the day.

**Weigh yourself when you get up in the morning (after you urinate for the first time and before you eat or drink) and record your weight.** You can use the last page of this handout, or you can use whatever system works for you. It is a good idea to keep your scale and whatever you use to record your weight in the bathroom. You can also use this form to record other information if you wish. Jot down things you want to discuss with your doctor. Take this paper with you to your follow up appointments.

**Do not repeatedly monitor your vital signs- it is easy to become obsessed with minor fluctuations that are completely normal, and cause unneeded stress.** To help remove extra fluid, your doctor may prescribe a **diuretic** (water pill). A couple of common diuretics are **Lasix (Furosemide)** and **Bumex (Bumetanide)**. Pay attention to how much you are urinating. If you are on a diuretic and notice you are not peeing much or your urine is dark colored - tell your doctor.

**Potassium** (as well as other electrolytes) are depleted when you take diuretics, so you may get a prescription for potassium with the diuretic. There are many different prescription names for potassium. Potassium's chemical symbol (K) comes from the Latin word "kalium", so most potassium prescriptions start with or include a "K". (Examples include K-Dur, Klor Con, Slow-K, K-Tab, to name a few). Take with food to prevent stomach upset. A low potassium level can cause heart rhythm problems, so be sure to take it as directed. Your doctor will monitor your electrolytes and kidney function periodically if you are taking diuretics.

Continuing to take a diuretic when you don't have extra fluid can cause low blood pressure, dizziness, dehydration and kidney damage.

**If your doctor tells you to stop taking your diuretic, you should also stop taking the potassium, unless directed otherwise.**

**Taking too much potassium is also dangerous.**

### **Swelling of your feet and ankles-**

The leg that they used to harvest a vein (to use for bypass), or the "surgical leg", will swell until your body adapts to the absence of the vein/s. The squeezing of the muscles in your legs while walking helps your body re-route the blood and decreases swelling sooner. If the swelling is bothering you, elevate your feet (higher than your heart) while sitting or lying down. T.E.D.™ hose or compression socks may also help- wear them when up, and take them off at night.

**Until told by your cardiologist you may stop, plan to:**

- Weigh yourself every day
- Record your weight
- Compare daily weights

**Notify your doctor if you gain:**

- 2-3 pounds in one day or
- 5 pounds in a week

**Especially** if you also have symptoms of fluid overload (too much fluid), such as:

- Feeling short of breath
- Swelling of feet, ankles, lower legs, or abdomen
- A dry hacky cough
- Having to use more pillows/sleep in a recliner to aid breathing

**If fluid overload worsens, so do the symptoms. Please call 911 if you have the following symptoms:**

- Confusion
- Struggling to breathe, even while resting
- Chest pain not relieved by Nitroglycerine
- Coughing or wheezing (new, or that doesn't go away)
- Coughing up pink, frothy spit



# Journal

| Date | Weight | Blood Pressure | Blood Sugar | Number of steps walked | Misc./Action<br>(i.e. call Dr., med change) |
|------|--------|----------------|-------------|------------------------|---|
| 1    |        |                |             |                        |   |
| 2    |        |                |             |                        |   |
| 3    |        |                |             |                        |   |
| 4    |        |                |             |                        |   |
| 5    |        |                |             |                        |   |
| 6    |        |                |             |                        |   |
| 7    |        |                |             |                        |   |
| 8    |        |                |             |                        |   |
| 9    |        |                |             |                        |   |
| 10   |        |                |             |                        |   |
| 11   |        |                |             |                        |   |
| 12   |        |                |             |                        |   |
| 13   |        |                |             |                        |   |
| 14   |        |                |             |                        |   |
| 15   |        |                |             |                        |   |
| 16   |        |                |             |                        |   |
| 17   |        |                |             |                        |   |
| 18   |        |                |             |                        |   |
| 19   |        |                |             |                        |   |
| 20   |        |                |             |                        |   |
| 21   |        |                |             |                        |   |
| 22   |        |                |             |                        |   |
| 23   |        |                |             |                        |   |
| 24   |        |                |             |                        |   |
| 25   |        |                |             |                        |   |
| 26   |        |                |             |                        |   |
| 27   |        |                |             |                        |   |
| 28   |        |                |             |                        |   |
| 29   |        |                |             |                        |   |
| 30   |        |                |             |                        |   |
| 31   |        |                |             |                        |   |

Take this record to your follow up appointments. If you want more copies of this form, please contact Sue Brown, RN at 423.495.8099.





**Scan here to view educational videos specifically for you!**